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How confident are final year students with the speech and language interventions utilised for the educational and social development of children with autism in one mainstream school in South Devon?

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Abstract

The aim of my research was to discover what speech and language intervention strategies are used in a mainstream school to assist children with autism, and how confident student teachers feel about these particular strategies. My method was to conduct semi-structured interviews with teachers from a mainstream school and online questionnaires for final year student teachers. This approach was adopted in order to position questionnaires for student teachers into a real context and compare their ideas about interventions to the strategies actually used in a school. After completing my research, a significant conclusion reached is that student teachers need more experience with intervention systems in order to be better prepared for their NQT year. I also found that teachers in a mainstream school have different opinions on the most useful intervention strategy, and that preferred choices depend upon individual children's development. The implications for my practice are to ensure I am prepared for implementing various interventions, be flexible and take advice from fellow colleagues.

Keywords: ASD, Autism, interventions, mainstream school, speech and language, student teachers

Introduction

Autism Spectrum Disorder (ASD) is a lifelong, developmental disability that affects how a person communicates with and relates to other people, (NAS, 2018; Fabri, 2019), and it is a condition that cannot be overlooked because it affects more than 1 in 100 people in the UK (Fabri, 2019). There are common characteristics and traits which people with autism generally display, including difficulty with communication and social interaction (Greven *et al.* 2019; DfE, 2015, p.85). It is a spectrum condition, which means that it impacts individuals in different ways, so each person with autism is unique (Cracknell, 2019). Thus the care of children with these conditions must be individually tailored (Autism Speaks, 2019). An intervention can be defined as any activity (treatment, therapy or service) that is designed to improve the quality of life for people on the autism spectrum (Research Autism, 2018). In addition, integration is considered a primary goal in special education research (Koegel *et al.*, 1992, p.342) and its possibility is enhanced through the implementation of interventions (DfE, 2015, p.47). Early interventions, including speech, behavioural, occupational, and music therapy, focus on helping children learn to interact with people and their surroundings (Speaks, 2011).

Professionals within education face significant challenges in the identification and implementation of effective interventions for children with ASD (Sansosti *et al.*, 2004, p.194). The purpose of research is to investigate questions and explore issues (Clough, Nutbrown, 2012, p.4). I believe research to be a primary tool for addressing challenges and ensuring progression within a 'fluid, ever-changing education system' (Murphy *et al.*, 2008, p.4). Consequently, the topic of my research project is effective speech and language interventions (SLI) for children with ASD. During my time as a student teacher, specialising in Special Educational Needs (SEN), I have observed

various approaches, most of which being SLIs, so I wanted to investigate the use and impact of these SLIs from professional teachers' perspectives and compare this with final year student teachers' awareness and understanding of these interventions. I will be discussing the impact of early intervention, in particular Picture Exchange Communication System (PECs) and Social Stories, and their effectiveness in ensuring progression and integration for children with ASD. To do this, I undertook interviews with teachers in a mainstream school, and provided an online questionnaire for student teachers.

I will first **carry out** a literature review of research around the topic of SLI's for children with ASD. I will then discuss the different aspects of my research, evaluate it, and discuss the implications of this research for my teaching practice.

Literature Review

This literature review will discuss the research surrounding autism and SLIs for children with autism, the impact of early intervention, and specific gaps in the literature. It will also focus on PECs and Social Stories, and their impact on children and communication.

As previously stated, ASD is a lifelong, developmental disability that affects how a person communicates with and relates to other people, (NAS, 2018; Speaks, 2011), and it affects more than 1 in 100 people in the UK (Fabri, 2019). Nevertheless, many children with ASD are left undiagnosed, with a ratio for known to unknown cases of 3:2 (Baron-Cohen et al., 2009). Each person with autism differs with unique needs and abilities (Research Autism, 2017); however, it is widely recognised that all people with autism share certain difficulties surrounding social communication and

interaction (Povey, 2015; McConnell, 2002, p.351). This characteristic was identified in the original description of autism (Kanner, 1943) and can present itself in multiple ways. For instance, communication difficulties may present themselves as the children having difficulty saying what they want to, not understanding what is being said to them, or not understanding or using social rules of communication (DfE, 2015, p.97). The ability to communicate is one of the most important foundation skills children learn and it has far-reaching implications for life-long confidence (Cracknell, 2013). Brown (2016) identified that children with autism can struggle with low self-confidence and life aspirations from a young age, whilst Hume (2005, p.203) states that early intervention may help instil confidence.

Approximately 40% of children with autism are delayed in learning to speak, and it is likely most children with autism will need support and strategies to help them learn to communicate, so they can have their needs met (Autism Education Trust, 2019).

Rogers (1996, p.243) collected and analysed the data from six different early intervention programs for children with autism, which all reported significant improvements in the children's developmental rates, language development and improved social behaviour. Although this is a slightly outdated piece of research, it has been supported by researchers in recent years, such as Boyd (2010, p.75), and Sulzer-Azaroff (2009), who found that PECs, as an early intervention system, also improved disruptive and dangerous behaviours. There is often direct correlation between communication and language difficulties and inappropriate behaviours such as aggression, self-stimulation, and self-injury (Koegel, 1995; Sansosti et al, 2004, p.194), and highlighting the importance of SLIs, because as a result of the interventions and as communication improves, behaviour may also improve. It has also been found that family involvement in early interventions may be deemed the

most effective contributor to child growth (Hume et al, 2005, p.205; Koegel et al, 1995; NRC, 2001), relating to the SEND Code of Practice(2015), whereby parents and families must be involved in the intervention process. If difficulties are identified and addressed as early as possible within a child's educational journey, this should have the greatest beneficial impact.

Freeman (1997) suggested that early diagnosis and intervention improve the prognosis for children with autism, an argument which has recently received more support (Boyd, 2010, p.83; Brown, 2016). Furthermore, initiating interventions at an early age has been proven to help children with autism increase skills (Speaks, 2011). The NAS (1999) also concludes that early diagnosis is crucial to enable effective intervention and management of the condition, and that this facilitates families in gaining access to appropriate services and support. The SEND Code of Practice (2015) is based upon principles from the Children and Families Act (2014), and it states that early identification can lead to early interventions in order to support the needs of individuals more efficiently. However, as already stated, many children with ASD are left unidentified (Baron-Cohen et al., 2009), and therefore their needs cannot be met. Even when autism may have been identified by the education system, families are not always willing to recognise or accept the possibility of this diagnosis and may resist the help offered. In addition, the medical system is frequently delayed in making diagnoses because waiting times for autism assessment are often very long (NHS, 2019). Consequently, families do not always gain early access to services, and this delays the possibility of successful integration into society.

The Children and Families Act (2014) states that local authorities in England must take action to ensure people with SEN are integrated into society, and that

educational provisions are implemented to improve their wellbeing and participation. The integration of individuals with disabilities by simply placing them together in the same setting, such as a mainstream classroom, without support can be problematic, (Koegel *et al.*, 1992). Such a strategy could result in poor social acceptance of individuals with special needs, negative rates of social interaction among their peers, and a generally negative attitude from educators toward those children with special needs placed in the mainstream classroom (Gresham, 1986). In order to achieve successful integration of individuals with autism, Koegel *et al.*, (1992) states that the development of social skills must be an integral component of the treatment program for children with autism. This emphasises the importance of intervention strategies that incorporate a functional life skills approach and may be considered best practice when educating individuals with ASD (National Research Council, 2001).

An important intervention strategy for the development of life and social skills is the Social Story; it is a short, personalised story that describes a specific activity and the behaviour expectations associated with that activity, and they have been suggested to positively affect the social understanding and behaviours of children with ASD

(Gray and Garand, 1993). The goal of a Social Story is to share accurate social information with a child with autism in a reassuring manner that is easily understood (Gray, 1994). For teachers, one benefit of Social Stories is their ease of construction and implementation (Reynhout, 2009, p.235). They are an example of an intervention strategy that incorporates both the facilitation of socialisation skills, and teaches children with ASD to gain perspectives (Sansosti, 2004, p.194), which it has been suggested improves the prosocial development of this group. In the report and analysis of eight studies that used Social Stories intervention for a diversity of behaviours, all resulted in observable changes to those target behaviours (Sansosti,

2004, p.196). It has also been found that Social Stories may be beneficial in modifying and achieving target behaviours amongst high functioning children with ASD (Karkhaneh et al., 2010).

PECs is another communication intervention strategy that can be used to support children with autism, but it is different to the other interventions because it is child-initiated intervention rather than controlled by an adult's verbal cues (Kravits et al., 2002, p.225). PECs is a pictorial system that was developed for children with social-communication deficits (Frost, Bondy, 1994), to help provide them with a means of communicating their needs. Children's social-communicative behaviours have been seen to increase after learning to use PECs, (Charlop-Christy, 2002, p.228; Sulzer-Azaroff, 2009), so in some cases it has been seen to help increase general communication, spontaneous language and the duration of social interactions with peers (Kravits et al., 2002, p.228). However, research suggests that for PECs to be most beneficial it takes 2 years of intensive PECs training and maintenance to enable participants to attain a functional communicative repertoire (Sulzer-Azaroff, 2009, p.98); however the amount of time it takes to see changes in communication does not necessarily mean it is not a worthwhile intervention strategy. Another study found that although PECs was helping children communicate whilst the intervention was actively being taught, the positive effects were not maintained once classroom consultations ceased (Howlin et al., 2007, p.478). This research indicates that PECs can be a useful intervention that may help improve some aspects of communication, provided it is reinforced and children are given time to learn and benefit from using it.

However, for any intervention to be at its most beneficial, it must be tailored to the individual's abilities, addressing their specific needs (Autism Speaks, 2019). Sansosti et al., (2004, p.194) stated that teachers must establish evidence-based practices for

educating individuals with ASD. Similarly, Research Autism (2017) states that the most effective interventions are personalised to meet the unique characteristics of each individual. According to the SEND Code of Practice (2015, p.25), teachers are supposed to be using integrated approaches, based on evidence, which have the required impact on progress. It also states that special educational provision for a child should always be based on an understanding of their particular strengths and requirements, which means that any and all interventions must be tailored to the individual's needs (DfE, 2015, p.85; NAS, 2018). From this body of research, it is clear that understanding a child's needs and abilities is vital for improving outcomes for ASD pupils, and Teaching Standard 5 (DfES 2013, p.11) states a teacher must adapt to the strengths and needs of all pupils, including those with SEN, and this may only be possible through personalised interventions.

Whilst carrying out initial desktop research, I became aware that there seem to be some gaps around student teachers' training when working with children with autism. Consequently, **the focus of my research** is student teachers' knowledge and understanding of specific interventions for children with autism.

Aim of research

The aim of the research project was to identify which SLIs are utilised in a mainstream school and which the teachers believed to be the most beneficial. This was then compared with final year students' knowledge of SLI's and their confidence to implement them.

Research Question

How confident are final year students with the speech and language interventions utilised for the educational and social development of children with autism in one mainstream school in South Devon?

Ethics

Fundamentally, this research project had few ethical issues; none of my participants were part of any at-risk groups and the topics discussed were not sensitive. The purpose was not to try and gain information from those with autism, but to investigate the opinions of the teachers and student teachers on the function and use of SLIs. Before starting my research project, I had to obtain approval from my supervisor to ensure the project was suitable and ethical issues had been addressed. All participants understood the aim of the research project before commencing, through a Participation Information sheet, through my verbally discussing the project with them, and through providing them with the opportunity to ask any questions. Before they took part, each person signed a consent form stating that they understood all aspects of the research and that they consent to the use of their data in my research. There was also an option for any participant to 'opt out' at any time, without any reasons needed. Confidentiality of participants was protected by ensuring all data was stored in secure computer files with no names or identifiable information (BERA, 2011, p.6).

During a face-to-face interview, there is an ethical demand to be open with the interviewee (Schostak, 2006, p.135), but there is a discussion about what 'openness' might mean in this context. Bourdieu (1993, p.12) defines 'openness' as listening

actively, and active listening can be defined as listening for a purpose (Purdy, 1997, p.11), and active listening is an essential ability for interviewers. The purpose of my interviews was to collect information and answers for later interpretation, so I employed a strategy of 'openness' throughout my research process in order to encourage the optimum insight and information from each participant.

Methods and Methodology

Questionnaires

My use of both interviews and questionnaires was a mixed method approach, chosen pragmatically because of the availability of participants. I combined closed and factual questions with more open questions, (Creswell, 2003, p.11) in order to achieve varied results for analysis. Using questionnaires to collect data can be an efficient use of time, with standardised questions, the potential for a high return rate, and they allow anonymity for the respondent (Munn, Drever, 1999, p.2; Fox *et al.* 2010, p.168). However, there are also limitations to questionnaires; for instance, the information can be superficial and/or descriptive rather than explanatory; and the questionnaires themselves need careful preparation, which takes time (Munn, Drever, 1999, p.2). I released my questionnaires online, 3 months before carrying out the interviews; this allowed my interview questions to relate more closely to the results from my questionnaires. After analysing the data from the questionnaires, I formulated the interview questions, so connections could be made across my research (Schostak, p.137). This allowed my research to be more focused and my interview questions to relate to my findings from the questionnaires.

Interviews

The kinds of answers given in interviews can be significantly influenced by body language, the place where the interview takes place, and the way the interview is begun (Munn, Drever, 1999, p.1). With interviews, the interpretation of the answers is the responsibility of the researcher (Nutbrown, 2012, p.99), which may mean that conclusions are biased as a result of my own epistemological position. I tried to achieve 'radical listening', leading to honest accounts which are faithful interpretations of what I heard (Nutbrown, 2012, p.99). I interviewed four teachers from different posts in a mainstream school in South Devon, class teachers from years 1 and 5, a 1:1 Teaching Assistant (TA), and an Speech and Language teaching assistant. This gave me a view from a variety of perspectives of the different interventions used in KS1 and KS2. In order to achieve systematic and comparable coverage (Johnson, Ransom, 1983, p.137) of the intervention strategies, I created a semi-structured interview, which included particular areas of enquiry. I also aimed to apply the interviewing skill of probing appropriately, whereby encouraging the respondents to clarify or extend their answers without influence (Hoinville, 1995, pp.101-102).

Limitations



Using Opie's (2004, p.68) definition of reliability, which states that reliability describes the extent to which a data-gathering process produces similar results in similar conditions, my research cannot be considered reliable, because it has not been tested in any other conditions. Contrastingly, because my questionnaires would contain the exact same questions, further data gathering could be undertaken in

different situations, and might perhaps be expected to produce similar results; this may have been possible to prove with more time and with a larger scale investigation. My research project cannot be considered representative because it is a small-scale study (Wellington, 2000, p.35). My questionnaires were sent to a small sample of student teachers, and I only interviewed staff from one school in South Devon, but they nevertheless provided me with realistic data for analysis and an in depth understanding of the practices used in that institution.

Findings and discussion

PECs

During my interview with the 1:1 TA, she stated that PECs was her most useful resource, and this was repeated in the interview with the year 2 teacher. With PECs, the 1:1 TA had seen considerable progress in relation to the pupil, not only in the child's ability to communicate with her, but in understanding what she, the teacher, was expecting of him. This relates back to my literature review, where frequently the use of PECs saw big improvements in social-communicative behaviours (Charlop-Christy, 2002, p.228). She stated that she uses this system every day, and that before it was introduced the child was more disruptive and presented challenging behaviours more frequently. She believed this was because he could not communicate his needs and it was the only way he could deal with his frustration. She stated that he enjoyed the use of PECs because it belonged to him and was his way of communicating with whomever he wished. This relates to Sulzer-Azaroff's research (2009), who saw less dangerous behaviour through the implementation of PECs and highlighting the importance of PECs for individuals with autism. In my questionnaires 23% of the respondents stated that they had little understanding of

PECs, and 31% stated they had some understanding but would not know how to implement it. 21% of the respondents stated that they had a very detailed understanding of PECs and how to implement it, however, this result may not be representative of all student teachers because 30% of my respondents were SEN specialists. The remainder of the participants stated that they had some understanding of PECs and how to use it. This means that over half the respondents felt unable to utilise the PECs intervention strategy.

Social Stories

Similarly, only 7% of the student teachers felt they had a secure understanding of Social Stories and how to use them, so from my findings I may be able to assume that student teachers do not feel confident with the use and implementation of Social Stories. On the other hand, 53% said that they had some knowledge of Social Stories and how to use them. Whilst this indicates that just over half of student teachers may be able to implement this strategy, it also seems to indicate that many may need more training to raise their levels of competence. However, the results also show they feel more confident about Social Stories than the PECs. In my interviews, one of the class teachers stated that Social Stories is one of the intervention strategies that is the most useful for children in year 5, as social development is more vital for children higher up the school. This links back to Sansosti (2004, p.196), who confirms the usefulness of Social Stories for prosocial development. During the same interview, the teacher stated that they were very useful because they could be personalised to suit the needs of the child and the situation, as required, linking to Reynhour (2009, p.235) who recognised the ease of construction and implementation for teachers.

Personalised interventions

During my interviews, there was a common understanding that an intervention that works with one individual would not necessarily work with another, and that the key to effectively providing for a child with autism is through knowing them. One response to my questionnaires highlighted this, stating that before working with a child with autism they found it difficult to know what the child might need, before realising that needs were 'very individual to the person'. This relates to the SEND Code of Practice (2015, p.85) and the National Autistic Society (2018), referred to above, where any and all interventions must be tailored to the individual's needs.

Student Teachers Confidence

In my questionnaire, I asked the student teachers to provide more information on their confidence about working with and providing for children with autism. This was potentially the most insightful section in my questionnaire, as it showed their opinions on their own training. None of the respondents felt 'Very Unprepared', but only one (8%) felt 'Well Prepared'. The majority of the respondents (69%) did say they felt 'Prepared', and when asked to expand in a following question, I learnt that 44% of the respondents had prior experience of working with children with autism, and therefore may be more knowledgeable than those whose knowledge comes only from the course. This can be seen in 33% of the answers, where they believe their courses did not focus on SEN training enough for them to feel confident in this area.

Conclusion

Through this research project, I conclude that, in general, unless they are SEN specialists, student teachers are unlikely to have a broad and deep understanding of different intervention methods to assist children with autism. However, throughout the responses to my questionnaires, there were multiple instances of feedback

stating that they feel they will gain the necessary training and understanding once in school, as and when needed. From these responses, I deduce that student teachers with SEN as their specialism have been taught and encouraged to be more aware of the various different interventions. When the research is viewed in this context, it suggests that, during their time at university, all student teachers might benefit from training in various intervention strategies in order to be better prepared to provide for and teach children with autism in their NQT year. If this is a valid observation, and future student teachers were to be given more training on different intervention strategies, then as a result, it could mean their future classrooms and learning environments would have the potential to be more inclusive. Consequently, student teachers would be better prepared to work with and challenge all individuals, relating to Teaching Standard Number 1 (DfES 2013, p.11).

I believe these research findings will impact upon my teaching, because I will try and ensure I am more aware of the broad range of different intervention strategies that are available, so I can more effectively provide for my future class or any individuals across the school. More specifically, I will ensure I am informed about the particular intervention strategies used at the school in which I am employed, as well as becoming familiar with all the children in my class, in order to ensure that they have the most effective interventions for their own specific needs. This correlates with Teaching Standard Number 5, (DfES 2013, p.11), because I want my teaching to be as beneficial for the children as can be.

Although my research project was small scale, I believe it has value because it begins to provide insight into how student teachers feel about a particular aspect of their training, highlighting a possible gap with regard to a specific issue. This could potentially lead onto further research, but for it to be more effective, the research

would need to be undertaken on a bigger scale, over a longer period, possibly encompassing alternatives to intervention strategies. It would also need to include a broader perspective by examining a cross-section of relevant international practice to provide contextual comparison.

For instance, in the wider national context, my research revealed the importance of tailoring provision to the individual's specific requirements. This has significant funding implications, but mainstream schools are supposedly provided with resources to support those with SEN or disabilities (DfE, 2015, p.109). However, in a survey of 1200 staff, three-quarters reported an average of 41 per cent reduction in SEND provision (Hayes, 2017, p.8). Budget cuts mean councils may not be able to meet their statutory duties, and consequently children with SEN needs could miss out on mainstream education (Hayes, 2017, p.8). This could affect the future delivery of SLI's.

My research also provided some insight into a small sample of student teachers' opinions, knowledge and understanding of SLIs for children with autism. There is more scope to explore the issue of student teachers' knowledge that could potentially create some adjustment to the way Primary Education is taught, and this conforms with the notion of a 'fluid and ever-changing education system' (Murphy et al., 2008, p.4). The results from this research may suggest student teachers might benefit from more training in the area of SEN and its particular intervention strategies. The interviews indicated that in KS1, focus for the interventions was based more on the development of general communication skills whereas in KS2, the agenda was more on the social development of the children, specifically linked to helping them socialise with their peers. This research has been useful for my own development and will impact my practice, because I will consider the types of

interventions, based on their age and stage in development. Also I am now more aware that I will not be fully equipped to work with any child with autism until I have spent time getting to know them. Each child with autism is different (Cracknell, 2019; Research Autism, 2017; Autism Speaks, 2019) and I must utilise an evidence-based approach to practice, (Sansosti et al., 2004, p.194; DfE, 2015, p.25) in order to tailor interventions to each child's specific needs.

Word Count: 4331

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